

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
10 February 2005 (10.02.2005)

PCT

(10) International Publication Number
WO 2005/011541 A1

(51) International Patent Classification⁷: **A61F 2/48**

(21) International Application Number:
PCT/AU2004/001019

(22) International Filing Date: 30 July 2004 (30.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003904032 1 August 2003 (01.08.2003) AU

(71) Applicant (for all designated States except US): VEN-
TRACOR LIMITED [AU/AU]; 126 Greville Street,
Chatswood, NSW 2067 (AU).

(72) Inventors; and

(75) Inventors/Applicants (for US only): AYRE, Peter,
Joseph [AU/AU]; 31A Devonshire Street, Crows Nest,

NSW 2065 (AU). COOK, Martin, Christopher [AU/AU];
Unit 3, 65 Bream Street, Coogee, NSW 2034 (AU).
WOODARD, John, Campbell [AU/AU]; 33 Holmes
Street, Turramurra, NSW 2074 (AU).

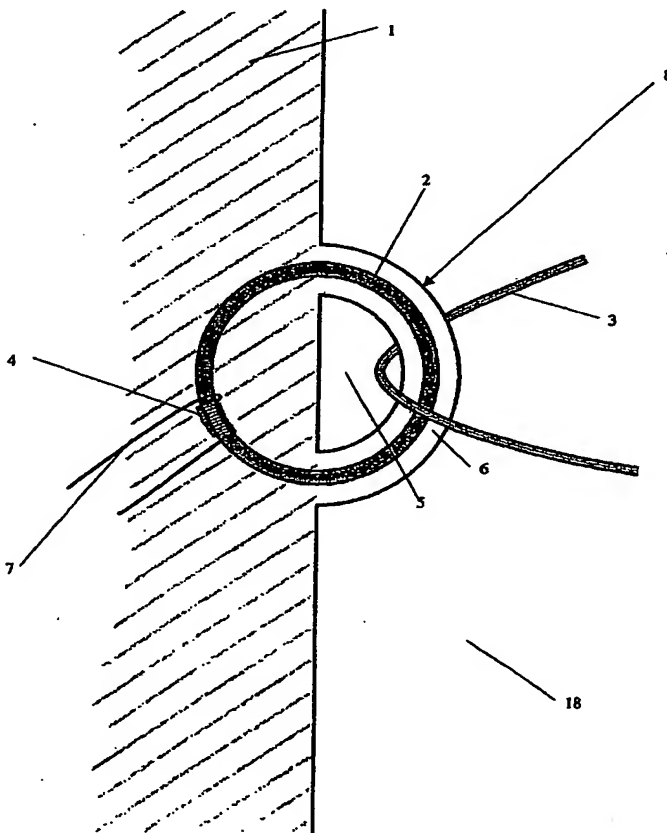
(74) Agent: HODGKINSON MCINNES PAPPAS; Level 3,
20 Alfred Street, Milsons Point, NSW 2061 (AU).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: IMPROVED TRANSCUTANEOUS POWER AND/OR DATA TRANSCIEVER SYSTEM



(57) Abstract: A device for communicating electric sig-
nals across the skin layer (1) of a patient, wherein the de-
vice includes: an electrically conductive core (2) capa-
ble of forming an EMF flux loop; first (3) and second (4)
coils, which are in EMF communication with said elec-
trical conductive core (2) and wherein the first coil (3) is
positioned externally to the patient and surrounds at least
a first portion of the electrically conductive core (2); and
the second coil (4) is implanted beneath or in the skin
layer and surrounds at least a second portion of the elec-
trically conductive core.

WO 2005/011541 A1



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.